That which is claimed is:

1. A shoe press, comprising:

a first member having a convex pressing surface;

a second member comprising a shoe with a concave pressing surface substantially complimentary to said convex pressing surface, said second member further comprising a pair of substantially circular head plates rotatably mounted on axially opposed ends thereof;

a substantially cylindrical belt fixed to, extending between, and rotatable with said head plates such that a portion of said belt passes between said convex pressing surface and said concave pressing surface, said belt including embedded therein a communications cable having a plurality of sensors configured to generate signals responsive to an operating parameter of said shoe press; and

a processing unit in communication with said communications cable sensing fiber that processes signals generated by said sensors.

2. The shoe press defined in Claim 1, wherein said first member comprises an elongate roll.

3. The shoe press defined in Claim 1, wherein said second member includes a beam member extending axially within said belt, and said shoe is mounted on said beam member.

4. The shoe press defined in Claim 3, further comprising a biasing unit that controllably biases said shoe against said belt.

5. The shoe press defined in Claim 1, wherein said belt comprises an outer polymeric layer, an inner polymeric layer, and a fabric layer sandwiched between said outer polymeric layer and said inner polymeric layer.

6. The shoe press defined in Claim 6, wherein said outer and inner polymeric layers comprise polyurethane.

7. The shoe press defined in Claim 6, wherein said outer polymeric layer has an outer surface facing away from said fabric layer, said outer surface including water venting recesses therein.

8. The shoe press defined in Claim 1, further comprising an endless press felt positioned to be conveyed between said belt and said pressing surface of said second member.

9. The shoe press defined in Claim 1, wherein said communications cable is an optical fiber.

10. The shoe press defined in Claim 1, wherein said fiber is disposed in said belt in a single helix.

11. The shoe press defined in Claim 1, wherein said processing unit is mounted on one of said head plates and is connected with said communications cable.

12. The shoe press defined in Claim 11, wherein said processing unit comprises a signal transmitter, and wherein said shoe press further comprises a signal receiver and a display device operatively associated with said signal transmitter.

13. The shoe press defined in Claim 12, wherein said signal transmitter is configured to emit radio frequency signals corresponding to the operating parameter detected by said sensors, and said signal receiver is configured to receive radio frequency signals transmitted by said signal transmitter.

14. The shoe press defined in Claim 1, wherein at least some of said plurality of sensors are configured to respond to one of pressure, strain, stress, and temperature experienced by the belt as it passes between said pressing surfaces of said first member and said shoe and generate signals corresponding to such pressure.

15. A belt for a shoe press, comprising:

a substantially cylindrical inner polymeric layer having a first longitudinal axis and a radially inner surface;

a substantially cylindrical outer polymeric layer having a second longitudinal axis that is substantially collinear with said first axis and a radially outer surface;

said radially inner and said radially outer surfaces defining a belt thickness;

a substantially cylindrical fabric layer sandwiched between said inner and outer polymeric layers; and

a communications cable having a plurality of sensors configured to detect an operating parameter of an extended nip press, said communications cable fiber extending within said belt thickness.

16. The belt defined in Claim 15, wherein said inner and outer polymeric layers comprise polyurethane.

17. The belt defined in Claim 15, wherein said polyurethane has a Pusey and Jones hardness value of between about 4 and 120.

18. The belt defined in Claim 15, wherein said outer surface includes a plurality of recesses for venting water.

19. The belt defined in Claim 15, wherein said fabric layer comprises a woven fabric.

20. The belt defined in Claim 15, wherein said fabric layer comprises a plurality of circumferentially-extending reinforcing members.

21. The belt defined in Claim 15, wherein said communications cable overlies said fabric layer and is at least partially embedded in said outer polymeric layer.

22. The belt defined in Claim 15, wherein said communications cable interweaves with said fabric layer.

23. The belt defined in Claim 15, wherein said communications cable is disposed in a single helix within said belt.

24. The belt defined in Claim 15, wherein said communications cable extends axially across said belt at a single circumferential location.

25. The belt defined in Claim 15, wherein said communications cable extends circumferentially within said belt at a single axial location.

26. The belt defined in Claim 15, wherein said communications cable is an optical fiber, and said sensors are microbend sensors.

27. The belt defined in Claim 15, wherein said sensors are configured to respond to an operational parameters selected from the group consisting of pressure, area, strain, stress and temperature and to generate signals proportionate to such operational parameter.

28. The belt defined in Claim 15, wherein said sensors are spaced substantially equidistant from each other along the length of said sensing fiber.

29. The belt defined in Claim 15, wherein said outer surface defines a circumference of between about 40 and 80 inches, and said belt thickness is between about 0.080 and 0.400 inches.

30. The belt defined in Claim 29, wherein said plurality of sensors is between about 10 and 40 sensors.